

**EPA Superfund
Record of Decision Amendment:**

PORTLAND CEMENT (KILN DUST 2 & 3)

EPA ID: UTD980718670

OU 02

SALT LAKE CITY, UT

09/29/1995

Text:

DECLARATION STATEMENT
FOR
AMENDED RECORD OF DECISION
PORTLAND CEMENT CO. (KILN DUST #2 AND #3)
COMBINED OPERABLE UNITS 1 AND 2
SALT LAKE CITY, UTAH

SITE NAME AND LOCATION

Portland Cement Co. (Kiln Dust #2 and #3)
Salt Lake City, Utah

STATEMENT OF BASIS AND PURPOSE

This decision document is an amendment to the Records of Decision (RODs) for Operable Units (OUs) 1 and 2 signed on July 19, 1990 and March 31, 1992, respectively for the Portland Cement Co. (Kiln Dust #2 and #3) Superfund Site (the Site). In June 1992, EPA and UDEQ combined OUs 1 and 2 to facilitate RD/RA. The OU-1 and OU-2 combined remedies are hereinafter referred to as the combined remedy. During remedial design (RD) of the combined remedy, EPA and the Utah Department of Environmental Quality (UDEQ) received new information which prompted modifications to the combined remedy. This document sets forth the modified combined remedy for the Site. This ROD Amendment is undertaken pursuant to the requirements delineated in Section 400.345 (c)(2)(ii) of the National Contingency Plan (NCP) and Section 117 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).

This document explains the basis for modifying the selected remedy for the Site that was set forth in the original RODs. The information that forms the basis for this remedial action decision is contained in the administrative record for the Site, and is summarized in the attached Decision Summary.

The State of Utah concurs with the modified combined remedy for the Site as set forth herein.

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, or the environment.

DESCRIPTION OF THE MODIFIED COMBINED REMEDY

The modified combined remedy addresses the contaminant sources at the Site including cement kiln dust (CKD) and chromium-bearing brick. The modified combined remedy also addresses CKD-contaminated soil underlying the CKD. EPA and UDEQ are addressing contaminated groundwater at the Site through a separate OU, OU-3. UDEQ is the lead agency for the on-going remedial investigation/focused feasibility study for OU-3.

The modified combined remedy includes the following major components:

- ! Removal and off-site disposal of CKD and contaminated soil. Disposal could occur in various types of facilities;
- ! Removal and off-site treatment and disposal of chromium-bearing bricks;
- ! Reuse of non-hazardous debris as Site fill material; and
- ! Following removal activities, covering the site with a minimum of 18 inches of clean backfill.

STATUTORY DETERMINATIONS

The modified combined remedy is protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions the maximum extent practicable and, in part, satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility or volume as a principle element.

Because the modified combined remedy will leave highly alkaline soils on site, a review will be conducted within five years following the commencement of remedial action to ensure that the remedy continues to

provide adequate protection of human health and the environment.

Robert L. Duprey, Director

Date

Hazardous Waste Management Division

EPA Region VIII

Dianne R. Nielson, Executive Director

Date

Utah Department of Environmental Quality

DECISION SUMMARY

AMENDED RECORD OF DECISION

PORTLAND CEMENT CO. (KILN DUST #2 & #3)

COMBINED OPERABLE UNITS 1 AND 2

SALT LAKE CITY, UTAH

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DECISION SUMMARY

FOR THE
AMENDED RECORD OF DECISION
PORTLAND CEMENT CO. (KILN DUST #2 & #3)
COMBINED OPERABLE UNITS 1 AND 2

I. INTRODUCTION

This document sets forth the modified selected remedy for the Portland Cement Co. (Kiln Dust #2 & #3) Superfund Site (Site), Combined Operable Units 1 and 2. This document also summarizes the basis for modifying the original remedy. This ROD amendment was developed to fulfill the requirements of the Comprehensive Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA) §117 and the National Contingency Plan (NCP) 40 CFR Part 300.435(c)(2)(ii).

The Site is located in Salt Lake City, Utah within a triangular area defined by Indiana Avenue, Redwood Road, and the Jordan River Surplus Canal. The 70 acre Site is a former dumping ground for cement kiln dust (CKD) and chromium-bearing kiln bricks, by-products of the cement manufacturing process. There is an estimated 500,000 cubic yards of CKD and 360 tons of chromium-bearing bricks at the Site.

The State of Utah Department of Environmental Quality (UDEQ) is the lead agency for conducting remedial design and remedial action (RD/RA) at the Site. The U.S. Environmental Protection Agency (EPA) is the support agency at the Site.

The RODs for Operable Units (OUs) 1 and 2 were signed on July 19, 1990 and March 31, 1992, respectively. In June of 1992, EPA and UDEQ combined OUs 1 and 2 to facilitate RD/RA. The OU-1 and OU-2 combined remedies are hereinafter referred to as the combined remedy. During RD of the combined remedy, EPA and UDEQ received new information which prompted a reevaluation of the original combined remedy. This information is described in detail in the Section II of this document.

This document does not attempt to fully summarize the basis for remedial action at the Site. The original RODs and the administrative record (AR) for the Site provide this basis and should be referenced for this information.

In accordance with the NCP section 300.825(a)(2), this ROD amendment is part of the AR for the Site. The AR for this Site is currently located at the following locations:

EPA Superfund Records Center
999 18th Street, Fifth Floor
Denver, Colorado 80202
Hours: M-F 8:00 a.m. to 4:30 p.m.

Chapman Library
577 South 900 West
Salt lake City, Utah 84104
Hours: M-Th 10 a.m. to 8 p.m.
Fr/Sat 10 a.m. to 6 p.m.

II. DESCRIPTION OF ALTERNATIVES AND REASONS FOR MODIFYING THE REMEDY

Both the original combined remedy and the modified combined remedy address all contaminant sources and the contaminated soil at the Site.

1. Original Combined Remedy

The original combined remedy involves removal and off-site disposal of CKD in a landfill constructed specifically for the Site waste. Co-disposed chromium-bearing bricks would be separated from the CKD and temporarily stored on-site. Co-disposed, non-hazardous materials at the Site, such as construction debris, would also be removed and disposed of in the landfill along with the CKD.

The landfill would be located in the general vicinity of the Salt Lake Valley Landfill in Salt Lake County. It would be constructed as an industrial waste, double-lined landfill equipped with leak detection. The landfill would have a layered cover system with a synthetic membrane and a six foot chain link fence to provide security.

Site soils contaminated above the action levels would be excavated. Contaminated soils that exhibit characteristics of a hazardous waste, as defined by the Resource Conservation and Recovery Act (RCRA), would be treated on-site. The stored chrome bricks at the Site would also be treated on-site. Treated materials and contaminated soils would be disposed of off-site at an appropriate facility. The soil action levels would be, for lead, 500 parts per million (ppm) and, for arsenic, 70 ppm. Chromium-bearing bricks would be treated through chemical fixation followed by solidification and the soils that exhibit characteristics of a

hazardous waste would be treated by solidification.

Following removal activities, the entire Site would be covered with a minimum of 18" of clean backfill.

Ground water at the Site would be monitored both before and after removal of the CKD and contaminated soils. The purpose of this monitoring would be to assess the need for ground-water remediation in the future.

If necessary, institutional controls in the form of deed restrictions would be imposed. These controls would be designed to control, as necessary, future ground water and land use at the Site. The need for institutional controls would be assessed during remedial design.

Operations and maintenance (O&M) of the remedy would include, at a minimum, 1) routine inspections of the new landfill site, 2) maintenance, as necessary, of the new landfill cap and the 18 inch soil cover at the Superfund Site, and 3) annual monitoring of the ground water quality surrounding the new landfill.

The remedy would cost \$19.3 million in present worth dollars. This cost assumes that the total capital costs would be \$23.5 million spent over a five year period and annual O&M costs of \$5,000 for a thirty year period. A summary of this cost estimate is provided in Table 2 and in the RODs for OU-1 and OU-2.

The major applicable or relevant and appropriate requirements (ARARs) for the remedy would be 1) State Hazardous Waste Storage regulations, 2) RCRA Land Disposal Regulations, and 3) Federal and State Air Quality Rules. Major rules which would apply to offsite activities include: 1) the State and Federal Solid and Hazardous Waste Rules, 2) the CERCLA Offsite Rule, and 3) the Department of Transportation Hazardous Materials Transport Rules. A complete listing of the ARARs for the remedy is provided in the RODs dated July 19, 1990 and March 31, 1992.

2. Reasons For Modifying The Remedy (New Information):

Since signing the Site RODs, EPA and UDEQ have received new information which has prompted consideration of a modified remedy. This information is as follows:

a. Unsolicited Proposals from Commercial Landfills: Several existing commercial landfills have contacted UDEQ with unsolicited proposals to accept the Site CKD. Some of these offers indicate that disposal in commercial landfills could be as or more cost-effective than constructing a new landfill.

b. Public Concerns Regarding Landfill Location: Members and leaders of the Salt Lake City and County and Magna communities have expressed opposition to constructing a new landfill in Salt Lake County. Summaries of the concerns raised by these communities can be found in the responsiveness summaries for the OUs 1 and 2 RODs and this ROD amendment.

d. EPA Reevaluation of RCRA Applicability: Since signing the OU-2 ROD, EPA has concluded that soils contaminated with CKD are exempt from regulation under the RCRA Subtitle C law (as is CKD)1. Previously, EPA took the position that soils contaminated with CKD were considered a RCRA hazardous waste and subject to RCRA Subtitle C requirements. One such RCRA Subtitle C requirement is that the waste be treated prior to disposal. Under EPA's new RCRA interpretation, soils that are contaminated with CKD do not need to be treated prior to disposal.

e. Value Engineering: During value engineering sessions held during Site remedial design, EPA and UDEQ made two cost saving determinations:

1) Since soils do not need to be treated prior to disposal, chrome bricks can be treated less expensively off-site than on-site because of the economies of scale. If only the chromium-bearing bricks require treatment, it becomes more expensive to design, mobilize, and operate a treatment facility on the Site than to send the materials to an existing treatment facility off-site.

2) Non-hazardous debris which has been disposed along with the CKD at the Site can be safely re-used at the Site as fill material following removal of the CKD. Studies indicate that there are approximately 300,000 cubic yards of construction debris mixed with soil fill at the Site, mostly concentrated in the west portion. Value engineering indicates that this soil and debris may provide a safe and cost-effective fill

material for the Site.

Based on the new information set forth in this section, EPA proposed a modified combined remedy in November 1993. This proposal was set forth in an EPA and UDEQ public fact sheet entitled: Explanation of Significant Differences and Proposed Plan to Amend the Records of Decision for Operable Units 1 and 2, dated November 1993 ("the Proposed Plan"). Since issuing the Proposed Plan, events have occurred that have prompted changes to the proposed Modified Combined Remedy. These events are as follows:

a. Start of OU-3 RI/FFS: In early 1994, EPA and UDEQ agreed to commence work on a remedial investigation/focused feasibility study (RI/FFS) for the ground water operable unit at the Site (OU-3). Previously, EPA and UDEQ planned to address OU-3 following removal of the CKD and soil. During remedial design it became apparent that it was possible, from a technical standpoint, to complete the RI/FFS process for OU-3 concurrent with remedial design and remedial action for OUs 1 and 2.

Starting the OU-3 RI/FFS affects the combined remedy in that groundwater

1 This determination was set forth in a memorandum from EPA headquarters offices to EPA Region VIII dated June 30, 1993. The subject of the memorandum is "Clarification of RCRA Application to Soils Contaminated by Cement Kiln Dust". This memorandum is in the AR.

monitoring and institutional controls, which were part of the combined OU-1 and OU-2 remedies, will now be addressed through implementation of the OU-3 remedial process.

b. State Assurances for Operations and Maintenance In February 1995, EPA awarded UDEQ a cooperative agreement (CA) for OU-1 and OU-2 remedial action at the Site. As part of the CA, UDEQ assured the future maintenance of the remedy as necessary to abate a direct and immediate threat to public health and the environment. In performing operations and maintenance, UDEQ will be taking appropriate measures to assure that there is not unacceptable exposure to the alkaline residual contamination which will remain at the Site following completion of remedial action. UDEQ and EPA are negotiating with the property owners to place deed restrictions on the Site to reduce the risk of unacceptable exposure to contaminants as described above. However, if UDEQ and EPA are unable to reach an agreement with the property owners, UDEQ may rely upon its statutory authorities and powers to satisfy its assurance, so finalization of the agreement with the property owners to place deed restrictions on the Site is not a prerequisite to implementing the remedy.

The original combined remedy called for institutional controls, as necessary, to control exposure to residual contamination at the Site. Since UDEQ has assured the future maintenance of the remedy as described above, IC's for this purpose are no longer a necessary component of the remedy.

c. Summitville Feasibility Study: In the Proposed Plan, EPA and UDEQ proposed using the Site CKD as an acid neutralizing agent as part of EPA's emergency response at the Summitville Mine in Colorado. Since issuing the Proposed Plan, EPA has determined that the Site CKD cannot be cost-effectively transported to the Summitville mine. Therefore, use of CKD as a resource is no longer a component of the combined remedy.

d. Design Site Characterization One remedial design task involved more-accurately defining the vertical extent of contamination at the Site. The primary purpose of this task was to quantify the volume of materials to be removed so that remedial action contractors could more accurately and competitively bid the project. Results of the design site characterization indicate that contaminated soil above the action levels and underlying the CKD extends to a maximum depth of 18". In some areas of the Site the design sampling showed residual contamination extending beyond 18", however, those areas were in all cases below the water table. These areas will be addressed through the OU-3 (groundwater) remedial process.

The OU-2 ROD calls for removal of all Site soil above the action levels. However, the ROD does not specify a maximum remediation depth. Based on results of the site characterization sampling and to address remedial action contracting concerns, EPA and UDEQ have modified the remedy so that it requires excavation and disposal of all contaminated soils to a maximum depth of 24".

3. Modified Combined Remedy

Based on analysis of the new information presented above, the following modified remedy was developed:

CKD would be removed and disposed of off-site. Disposal could occur in either a commercial landfill or a landfill constructed off-site specifically for the Site CKD (as in the original remedy). Based on information received during remedial design, disposal in a commercial landfill would provide the best balance of the NCP's nine criteria (these criteria are summarized in Section III, of this document). Final selection of the disposal option (commercial versus constructing a new landfill) would be made following evaluation of bids received from commercial landfills during the remedial action contractor procurement process. Construction of a new landfill would be considered only if disposal in a commercial landfill is found to provide an unacceptable balance of the nine evaluation criteria.

The landfill chosen or constructed would be lined and capped according to applicable laws and would comply with EPA's Off-site Rule. Co-disposed non-hazardous materials at the Site would either be disposed of off-site or used at the Site as backfill (this decision would be made during remedial action and would be based on whether it is economically feasible to separate CKD from non-hazardous debris).

CKD-contaminated soils would be removed to a maximum depth of 24" and disposed of off-site. Contaminated soils would not be treated prior to disposal. Chrome bricks would be separated from the CKD and be treated and disposed of off-site. Chrome bricks would be treated and disposed of in accordance with applicable RCRA land disposal regulations. Following removal activities, the entire Site would be backfilled with a minimum of 18" of clean backfill.

O&M of the remedy would include: 1) routine inspections of the new landfill site (if one is built), 2) maintenance, as necessary, of the new landfill cap, and 3) maintenance, as necessary, of the 18 inch soil cover at the Superfund Site. If a new landfill is not constructed, O&M would be limited to only item 3): maintenance, as necessary, of the 18" cap at the Site.

The remedy would cost \$ 18.6 million in present worth dollars. This cost assumes that the total capital costs would be \$ 21.8 million spent over a five year period and annual O&M costs of \$5,000 for a thirty year period. A summary of this cost estimate is provided in Tables 1 and 2.

The major ARARs for the remedy would be 1) State Hazardous Waste Storage regulations and 2) Federal and State Air Quality Rules. Major rules which would apply to offsite activities include: 1) the State and Federal Solid and Hazardous Waste Rules, 2) the CERCLA Off-site Rule, and 3) the Department of Transportation Hazardous Materials Transport Rules. Table 3 provides a complete analysis of the ARARs for the modified remedy.

4. Summary of Changes to The Combined Remedy.

The differences between the original and proposed modified combined remedies are summarized below. This summary also indicates which changes to the remedy EPA and the State consider fundamental² changes rather than significant changes:

Original Combined Remedy:		Modified Combined Remedy:	
Fundamental Changes:			
o	Treat contaminated soils to meet land-ban restrictions (apply RCRA subtitle C to soils).	o	Do not treat contaminated soils prior to disposal.
o	Non-hazardous debris at the Site is to be removed and disposed of off-site.	o	Non-hazardous debris would either be used as Site backfill or disposed of off-site.
Significant Changes:			
o	Removal and off-site disposal of CKD. Construct landfill near Salt Lake Valley Landfill.	o	Removal and off-site disposal of CKD. Consider the following options for disposal: <div><div>a.</div>Dispose of CKD in a permitted commercial landfill.</div> <div><div>b.</div>Construct a landfill off-site.</div>
o	Use double liner for landfill interior and cap with vegetated layer.	o	Type of liners used would depend on regulations governing the landfill chosen for disposal.
o	Treat chrome bricks on-site.	o	Treat chrome bricks off-site.

III. EVALUATION OF ALTERNATIVES

This section provides the comparative analysis of the Original Combined Remedy and the Modified Combined Remedy with respect to the nine key criteria established in the NCP. These criteria are:

- (1) Overall protection of human health and the environment;
- (2) Compliance with ARARs;
- (3) Use of treatment to achieve a reduction in the toxicity, mobility or volume of contaminants;
- 2 The criteria used to classify changes as significant and fundamental are set forth in the NCP.
- (4) Long-term effectiveness and permanence in protecting human health and the environment;
- (5) Short-term effectiveness in protecting human health and the environment;
- (6) Implementability;
- (7) Cost-effectiveness;
- (8) State acceptance; and
- (9) Community acceptance.

Criteria 1 and 2 are threshold criteria and must be met by the selected remedial action alternative. Criteria 3, 4, 5, 6, and 7 are balancing criteria. The final two are modifying criteria which are used to evaluate the alternatives based on UDEQ and community concerns.

The strengths and weaknesses of the alternatives were weighed to identify the alternative providing the best balance among the nine criteria. This section provides a summary of this analysis.

Overall Protectiveness of Human Health and the Environment

Both alternatives would equally reduce risks to human health and the environment at the Site in that both alternatives provide for complete removal of waste sources and soils contaminated above action levels.

Compliance with ARARs

Both Alternatives would comply with all ARARs at the Site.

Long-term Effectiveness

At the Site, both alternatives equally provide for long-term effectiveness and permanence in that both alternatives provide for complete removal of waste sources and soils contaminated above action levels.

Off the Site, the modified combined remedy is more effective in the long-term because, if an existing commercial landfill is used for disposal, there will not be the added operations and maintenance requirements associated with maintaining a new landfill for the waste CKD and soil.

Reduction of Toxicity, Mobility, and Volume Through Treatment

The modified combined remedy is less-effective at reducing the toxicity of contaminated soil since soils would not be treated prior to disposal.

Both alternatives provide for reduction of mobility of CKD and contaminated soils in that the wastes will be disposed of in accordance with EPA's Off-site Rule. However, the original combined remedy would provide better reduction of the mobility of CKD because the waste would definitely be disposed of in a double-lined landfill.

Both alternatives equally provide for reduction of mobility and toxicity of chromium-bearing bricks through off-site treatment and disposal.

Short-term Effectiveness

The modified remedy is more effective in the short-term because it could potentially be implemented by the end of 1995. The original remedy, on the other hand, would likely take 2 to 3 years longer because of the time associated with permitting and constructing a new landfill. However, the modified remedy is less protective in the short-term due to risks associated with transporting contaminated materials because bricks will be treated off-site and soils would not be treated prior to disposal.

Implementability

The modified remedy is more implementable because there are more options for disposal of CKD. As described above, several existing commercial landfills are interested in receiving the CKD. Moreover, alternatives for disposal of CKD that do not require constructing a new landfill are more viable since there are uncertainties associated with successfully obtaining a new landfill permit. In addition, because soils no longer require treatment, design and development of a treatment system is no longer necessary.

Cost

The modified remedy costs the same as or less than the original remedy in the following areas:

1. A commercial facility would be used for disposal of CKD only if it is as or more cost-effective than constructing a landfill. As discussed in Section II., remedial design estimates indicate that the costs for transportation and disposal of CKD in a newly constructed landfill are comparable to disposing it in a commercial landfill.
2. The modified remedy would not include the cost of treating the contaminated soils prior to disposal. This amounts to a savings of approximately \$2.9 million in capital cost.³
3. By treating the chromium-bearing brick off-site instead of on-site a treatment process does not need to be designed and a treatment plant does not need to be mobilized. Design estimates indicate that treating the bricks off-site would save approximately \$1,358.50 per ton of brick.⁴
4. Reusing the non-hazardous construction debris on the West site as backfill could save up to \$29 per ton of material reused.⁵

State Acceptance

UDEQ has worked in partnership with EPA throughout the ROD Amendment process and concurs with the selected remedy for the Site.

Community Acceptance

Community input on the proposed modified remedy was solicited by EPA and UDEQ during the public comment period from November 1, 1993 to December 1, 1993. No opposition to the proposed modified remedy was expressed with the exception of one written comment. This comment expressed opposition over the possibility of constructing a new landfill near Magna's residential areas (as called for in the original combined remedy). Responses to community comments are in the attached responsiveness summary.

IV. THE SELECTED REMEDY

EPA and UDEQ believe that the Modified Combined Remedy meets the threshold evaluating criteria of the NCP and provides the best balance of the remaining criteria among the two alternatives considered. EPA and UDEQ have therefore selected the Modified Combined Remedy, as described above, to address risks posed by the Site.

Remedial Action Objectives:

The objectives of the modified combined remedy are:

- 1) to remove the source of soil and ground water contamination;

[3 This figure is based on the cost estimate for soils treatment provided in the OU2 ROD.]

[4 This figure is based on URS estimates published in memo from Ralph Rice to Steven Thiriot dated May 26, 1993. This figure assumes disposal at the ESI facility.]

[5 This figure is based on the engineer's cost estimate published by URS consultants.]

- 2) to reduce risks associated with:
 - a. direct contact with waste CKD;
 - b. exposure to windblown dust from the waste CKD;
 - c. exposure to soils with elevated levels of lead, arsenic, and alkalinity; and
 - d. exposure to chromium
- 3) to minimize restrictions on future use of the Site; and
- 4) to comply with all CERCLA requirements and all identified ARARs and applicable laws and regulations for off-site work.

Remediation Goals and Performance Standards:

Remediation goals are designed to attain the remedial action objectives. Since no Federal or State chemical specific ARARs exist for soils, action levels were developed through a site-specific risk analysis. The action level for lead is 500 ppm and is based upon an acceptable blood-lead level in children exposed to the soil through ingestion. At the lead action level, no more than 5% of children exposed to soil at the Site are predicted to have a blood-lead level above the acceptable level of 10 :g/DL.

The action level for arsenic in soil is 70 ppm. Although arsenic levels above 70 ppm have not been detected on the site, the action level is established because arsenic can not be ruled out by statistical analysis as a contaminant of concern. Soil containing arsenic at the action level concentration pose a 2×10^{-5} risk of contracting cancer as a result of ingesting soil and a 5×10^{-5} risk of contracting cancer as a result of ingesting vegetables grown in the soil.

An action level for alkalinity was not determined since there is currently no method of quantifying risks due to exposure to alkaline soils. Therefore, the selected remedy does not require removal of soil exceeding a specific pH or alkalinity. However, the selected remedy requires placement of a clean layer of fill to a minimum depth of 18" following removal of site wastes. This clean layer is designed to provide protection from exposure to high pH soil remaining on the Site, to enhance Site soil pH equalization to levels near background, and to limit the need for restrictions on future use of the Site.

In summary, the remediation goals for the Site are:

1. All CKD will be removed and disposed of off-site;
2. Soils with contaminant concentrations above the action levels will be removed to a maximum depth of 24" and disposed of off-site. The action level for lead is 500 ppm and the action level for arsenic is 70 ppm;
3. All chromium-bearing kiln bricks will be removed and transported off-site where they will be treated and disposed of. The chromium-bearing bricks will be treated to comply with all applicable laws.
4. Following removal of the CKD, chrome bricks, and contaminated soils, the entire site will be covered with a minimum of 18 inches of clean fill.

Costs:

The estimated cost of the Modified Combined Remedy is summarized in Tables 1 and 2.

V. STATUTORY DETERMINATIONS

The selected remedy meets the statutory requirements of Section 121 of CERCLA. The statute requires that remedial actions undertaken at Superfund sites be protective of human health and the environment. The statute also mandates that the selected remedy comply with applicable or relevant and appropriate standards established under Federal and State environmental laws unless a statutory waiver is justified. In addition, the selected remedy must be cost-effective and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The statute also includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous substances as their principal element. The following sections describe how the selected remedy meets these statutory requirements.

Protection of Human Health and the Environment:

The selected remedy would remove contaminant sources from an area of relatively high population that is

subject to increased urbanization, thereby providing the maximum reduction of the risks of direct contact and exposure to blowing dust and removing a potential source of groundwater contamination. The chromium-bearing bricks will be treated to eliminate or reduce associated health risks both on the Site and at the off-site disposal facility. The selected remedy is considered to be highly protective of human health and the environment. The implementation of the remedy will not pose unacceptable short-term risks. The selected remedy will facilitate the final remediation of the Site by removing potential sources of groundwater contamination.

Attainment of Applicable or Relevant and Appropriate Requirements (ARARs) of Environmental Laws:

The primary requirements that are applicable or relevant and appropriate to the selected remedy are:

- ! EPA's CERCLA Offsite Rule governing the offsite transfer of CERCLA waste;
- ! Federal and State solid and hazardous waste disposal regulations;
- ! Federal land disposal restrictions pertaining to storage of hazardous waste;
- ! Federal land disposal restrictions pertaining to the treatment of hazardous waste prior to land disposal; and
- ! Federal and state air regulations on total suspended particulate and fugitive dust control.

The selected remedy will meet all ARARs. A summary of ARARs and guidelines to be considered (TBCs) for the selected remedy is presented in Table 3.

Cost-Effectiveness:

The selected remedy is cost-effective in mitigating the Site risks posed by CKD, contaminated soils, and chromium-bearing bricks. Section 300.430(f)(ii)(D) of the NCP states that once a remedial action satisfies the threshold criteria (i.e., overall protection of human health and the environment and compliance with ARARs), cost-effectiveness is determined by evaluating the relationship between overall effectiveness and cost.

The component of the modified combined remedy which addresses CKD waste is more cost-effective than the original remedy since it provides better overall protectiveness than the original remedy at a comparable cost. This component requires less-long term O&M since a new landfill will not need to be maintained.

The component of the modified combined remedy which addresses contaminated soils is less-effective overall. The modified remedy provides for less reduction of the toxicity of the contaminated soils since the soil will not be treated prior to disposal. Moreover, the modified combined remedy poses more short term risks since the contaminated soils will be transported to a disposal site without prior treatment. However, because the modified combined remedy addresses contaminated soil less-expensively, its cost-effectiveness is equal to or better than the original remedy.

Utilization of Permanent Solutions and Alternative Treatment Technologies:

The modified combined remedy utilizes permanent solutions and treatment technologies to the maximum extent practicable. The modified combined remedy reduces the toxicity of the chrome-bearing bricks through treatment. The modified combined remedy reduces the mobility of all Site wastes through disposal in a landfill or facility which meets the requirements of EPA's Offsite Rule.

Preference for Treatment as a Principal Element:

The modified combined remedy in part satisfies the statutory preference for remedies that employ treatment as a principal element. Chromium-bearing bricks will be treated using proven technologies to reduce available levels of chromium. Neither the CKD nor the CKD-contaminated soil, however, will be treated prior to disposal. The remedy will not include treatment of these materials because they are high-volume, low-toxicity wastes, exempt from RCRA Subtitle C as a result of the Bevill Amendment.

TABLE 1

MODIFIED COMBINED REMEDY COST ESTIMATE

Item	Description	Modified Unit	Modified Unit Cost	Modified Total Cost
	New Landfill:			
1	Permits	1	50,000 (2)	50,000
2	Land Aquisition	30	12,500 (2)	375,000
3	Disposal of CKD + Soil	523,000	22 (2)	11,506,000
4	Haul, treat, and dispose chrome brick	360	219 (3)	78,840
5	Mobile sampling/analysis	10	850 (2)	8,500
6	Haul, grade, and compact clean fill	169,400	12 (2)	2,032,800
				=====
	Subtotal:			14,051,140
7	Contingency [20% of subtotal] (2)			2,810,228
8	Engineering (4)			2,100,000
9	Mobilization [4% of subtotal] (2)			562,046
10	Construction Management [15% of subtotal] (2)			2,107,671
	TOTAL CAPITAL COSTS:			\$21,631,085
11	O&M [5k/yr for 30 years] (2)			150,000
	TOTAL PRESENT WORTH: (5)			\$18,514,458

(1) These estimates are designed to be accurate to at least +50 percent or -30 percent.
(2) Based on estimates set forth in original ROD for OU-1 or OU-2.
(3) Refer to URS Memo dated 5/26/93.
(4) Based on existing remedial design contract between UDEQ and URS Consultants.
(5) See Table 2 for discounting assumptions.

TABLE 2

ORIGINAL COMBINED REMEDY COST ESTIMATE

		Annual Expenditures:				
	Totals:	years:	1	2	3	4
Capital costs	23,517,000 (2)		4,703,400	4,703,400	4,703,400	4,703,400
present worth @ 7% (3)	19,284,869					
annual O&M	5,000					
pw of O&M @ 7% year 0	44,237					
Total present worth:	\$19,329,106					

MODIFIED COMBINED REMEDY COST ESTIMATE

	Totals:	years (4):	1	2	3	4	5
Capital costs	21,631,085		2,100,000	9,765,543	9,765,543	0	0
present worth @ 7%	18,463,811						
annual O&M	5,000						
pw O&M @ 7% year 0	50,647						
Total present worth:	\$18,514,458						

- Notes:
- (1) These estimates are designed to be accurate to at least +50 percent or -30 percent.
 - (2) Capital costs for the Original Combined Remedy are from the original RODs for OU1 and OU2.
 - (3) Discount rate based on OSWER Directlye No. 9355.3-20, dated June 25, 1993.
 - (4) Modified remedy can likely be implemented in three years based on current design schedule.
 - (5) Assumes year 1 incurs design costs only.

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
CHEMICAL-SPECIFIC ARARS - FEDERAL				
CLEAN WATER ACT				
- Effluent Limitations POTW, this will	Section 301	yes/no	yes	If site dewatering discharge of water to adjacent water body or apply.
- Toxic and Pretreatment Effluent	Section 307	yes/no	yes	Would apply to discharge of dewatering effluent into POTW Standards
- NPDES bodies.	40 CFR Parts 122-125	no/no	yes	Would apply to discharge of dewatering effluent into adjacent water
CLEAN AIR ACT				
- National Primary end Secondary Ambient construction. Air Quality Standards	42 USC §§7401-7642 40 CFR Part 50	no/yes	yes	Dust control will be required before, during, and alter
RESOURCE CONSERVATION AND RECOVERY ACT				
- Identification Hazardous Waste on-site. TSD facility	42 USC §§6907(a)(3), 6944(a), 6949(a) 40 CFR Pad 261	yes/no	yes	Applies to task of identifying and segregating hazardous wastes may run tests on chrome bricks in characterize waste.
- Land Disposal Restrictions either apply or are identification, and	40 CFR Pad 268	yes/no	yes	Applies to offsite TSD facilities receiving chrome bricks. Portions relevant and appropriate to on-site activities such as segregation, temporary storage of hazardous wastes on-site.

TABLE 3 ARARS for MODIFIED COMBINED REMEDY				
REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
CHEMICAL-SPECIFIC ARARS - STATE				
UTAH WATER QUALITY RULES				
- Utah Pollution Discharge Elimination bodies. System	R317-8	no/no	yes	Would apply to discharge of dewatering effluent into adjacent water
- Wastewater treatment	R317-3, R,317-4, R317-5, R317-10	yes/no	yes	Would apply to discharge of dewatering effuent into POTW.
UTAH AIR CONSERVATION ACT				
- Air Pollution Prohibited 1.11	R307-1-2.1	yes/no	yes	Prohibits any emissions which cause air pollution as defined in §
- Notice of Intent & Approval Order non-major sources	R307-1-3.1	no/yes	yes	Some portions of this requirement may be relevant and appropriate to at the Site or off-site facility to which the waste is transferred.
- Non-attainment Area Requirements- New Source	R307-1-3.3	yes/no	yes	Site is in a non-attainment area.
- Visible Emissions after construction.	R307-1-4.1	yes/no	yes	Visible emissions at Site must be controlled before, during, and Visible emissions must not exceed 20% opacity.
- Sulphur Content of Fuels	R307-1-4.2	yes/no	yes	Applies if certain fuels are burned at the Site.
- Control of Fugitive Dust Emissions	R-307-1-4.5	yes/no	yes	Dust control will be required during construction

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
UTAH SOLID AND HAZARDOUS WASTE ACT	UCA Title 19 Chapter 6			
- Exclusion a hazardous waste.	R315-2-4	yes/no	yes	Applies in that it is used to determine which waste at the Site is
- Characteristics of Hazardous Waste s hazardous waste.	R315-2-9	yes/no	yes	Applies in that it is used to determine which waste at the Site is
- Lists of Hazardous Waste n hazardous waste.	R315-2-10	yes/no	yes	Applies in that it is used to determine which waste at the Site is
- Land Disposal Restrictions	R315-13	yes/no	yes	Applies to offsite disposal of chrome bricks.
- Appendices a hazardous waste.	R315-50	yes/no	yes	Applies in that it is used to determine which waste at the Site is
- Corrective Action Clean-up Standards (Except Those Pertaining to Groundwater Protection)	R315-101	yes/no	yes	Sets minimum clean-up standards for hazardous waste.
CHEMICAL SPECIFIC ARARs - LOCAL				
SALT LAKE CITY ORDINANCE- WASTEWATER CONTROL ORDINANCE/RULES AND REGULATIONS	Title 37 revised ordinance of Salt Lake City Corporation	yes/no	yes	Applies if site water is discharged to sewer system.
ACTION-SPECIFIC ARARS - FEDERAL CERCLA				
- Offsite Rule transferred.	40 CFR Part 300.440	no/no	yes	Applies to off-site facilities in which the Site wastes are
CLEAN WATER ACT				
- Best Available Technology Effluent point source. May Treatment Requirements transferred.	40 CFR Part 122.44(a)	yes/no	yes	Would apply if dewatering effluent is discharged to water body as a apply to off-site facility(ies) to which Site wastes are
- Effluent Monitoring Requirements point source. May transferred.	40 CFR Parts 122.41(i) and 136.1-136.4	yes/no	yes	Would apply if dewatering effluent is discharged to water body as a apply to off-site facility(ies) to which Site wastes are

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
- Best Management Practices for Treatment point source. May Effluent	40 CFR Parts 125.100	yes/no	yes	Would apply if dewatering effluent is discharged to water body as a
				apply to off-site facility(ies) to which Site wastes are transferred.
- Discharge to POTW Requirements source. May	40 CFR Part 403.5	yes/no	yes	Would apply if dewatering effluent is discharged to POTW as a point
				apply to off-site facility(ies) to which Site wastes are transferred.
- Storm water requirements remedial action will	40 CFR Part 122.26(c)1ii	yes/no	yes	Applies to open excavations exceeding 4 acres. Excavations during
				likely exceed this amount. May apply to off-site facillty(ies) to
which Site wastes are				transferred.
SOLID WASTE DISPOSAL ACT	42 USC §§6901-6987			
- Land Disposal of Solid Waste Will apply if non-	40 CFR Part 241	yes/no	yes	Applies to off-site facilities to which Site waste is transferred.
				hazardous debris is used as Site backfill.
RESOURCE CONSERVATION AND RECOVERY ACT	42 USC §§6907(a)(3),6944(a),6949(a)			
- Standards for Hazardous Waste Generators	40 CFR Part 262	yes/no	no	Applies because EPA/UDEQ become generators by excavating chrome brick.
- Standards for Transporters of Hazardous Waste	40 CFR Part 263	no/no	yes	Applies to off-site transport of bricks.
- Container Storage of Hazardous Waste on-site.	40 CFR Parts 264.171-173 and 264.176-178	yes/no	yes	Will apply if containers are used to temporarily store hazardous waste
- Waste piles	40 CFR Parts 264.251 and 268.2	yes/no	yes	Applies to temporary stock pilling of chrome brick,
- Chemical, Physical and Biological facilities. The off-site Treatment handling, storage, requirements.	40 CFR Part 265.400 et seq.	no/no	yes	Applies to owners and operators of hazardous waste treatment
				facility that will treat the bricks will comply with all waste
				reporting, record keeping and manifest
- Land Disposal Restrictions either apply or are	40 CFR Part 268	yes/yes	yes	Applies to offsite TSD facilities receiving chrome bricks. Portions
				relevant and appropriate to on-site activities such as segregation,
identification, and				temporary storage of hazardous wastes on-site.

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
- Definition of Inorganic Soil and Debris disposition, chrome brick	40 CFR Part 268 (g,h)	yes/no	yes	Depending on, among other things, their size at the time of could be considered "soil end debris".
- Waste-specific Prohibition- Third Third facilities. Wastes	40 CFR Part 268.35	no/no	yes	May apply to disposal of chrome bricks and mixtures thereof in off-site
- Prohibition on Storage of Restricted threshold Wastes	40 CFR Part 268.50	yes/no	yes	May apply to temporary storage of chrome bricks if storage time exceeds amount.
- Hazardous Waste Permit Program	40 CFR Part 270	no/no	yes	Applies to off-site TSDs.
SURFACE MINING CONTROL AND RECLAMATION ACT				
- Erosion Control	30 CFR Part 816.41	no/yes	no	Relevant and appropriate to open excavations during RA.
- Backfill and Grading	30 CFR Part 816.102	no/yes	no	Relevant and Appropriate to regrading the Site following remediation.
- Revegetation remediation.	30 CFR Part 816.11	no/yes	no	Relevant and Appropriate to re-vegetating the Site following
DEPARTMENT OF TRANSPORTATION brick. HAZARDOUS MATERIAL TRANSPORT REGULATIONS	40 CFR Parts 107, 171-179.	no/no	yes	Applies to transportation of Site wastes, including CKD and chrome
Action Specific ARARs - State				
UTAH SOLID AND HAZARDOUS WASTE ACT	UCA Title 26 Chapter 14			
- Residues of Hazardous Waste in Empty Containers	R315-2-7	yes/no	yes	Applies to use of hazardous waste containers at the site.
- Discarded Waste	R315-2-11	yes/no	yes	Applies to the Site in the event discarded wastes are discovered.
- Application and Plan Approval to temporary Procedures for TSDFs	R315-3	no/yes	yes	Substantive portions of these requirements are relevant and appropriate storage of Site hazardous waste. Applies to off-site TSDFs.
- General Facility Standards for Owners to Site. Applies and Operators of TSDFs.	R315-8-2	no/yes	yes	Substantive portions of these requirements are relevant and appropriate to off-site TSDFs.

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
- Preparedness & Prevention to Site	R315-8-3	no/yes	yes	Substantive portions of these requirements are relevant and appropriate hazardous waste. Applies to off-site TSDFs.
- Contingency Plan & Emergency to Site. Applies Procedures	R315-8-4	no/yes	yes	Substantive portions of these requirements are relevant and appropriate to off-site TSDFs.
- Closure and Post-Closure to Site. Applies	R315-8-7	no/yes	yes	Substantive portions of these requirements are relevant and appropriate to off-site TSDFs.
- Use and Management of Containers	R315-8-9	yes/no	yes	Applies to use of containers st Site.
- Surface Impoundment Off-site TSDF.	R315-8-11	yes/no	yes	Applies if "surface impoundments" are constructed at the Site or
- Waste Piles	R315-8-12	yes/no	yes	Applies if "waste piles" are constructed at the Site or Off-site TSDF.
- Landfills	R315-8-14	no/no	yes	Applies to Off-site TSDFs.
- Emergency Controls	R315-9	yes/no	yes	Applies if hazardous wastes or materials are spilled at the Site.
UTAH AIR CONSERVATION ACT	UCA Title 19 Section 19-2- 101			
- Emission Reporting Site or the	R307-1-2.2	yes/no	yes	Applies if "stationary source(s)" are constructed and operated at the facility to which the Site wastes are transferred.
- Variances Authorized	R307-1-2.3	yes/no	yes	Variances may apply to the Site.
- General Burning	R307-1-2.4	yes/no	yes	Open burning of trash is prohibited at the Site.
- Emission Testing	R307-1-3.4	yes/no	yes	Required if Site or off-site facility is considered "source".
- Unavoidable Breakdown	R307-1-4.7	yes/no	yes	Applies to breakdown situations at the Site.
ACTION SPECIFIC ARARs - LOCAL				
SALT LAKE CITY/COUNTY HEALTH Site. These DEPARTMENT, HEALTH dispose CKD. REGULATIONS NO. 1, SOLID WASTE MANAGEMENT FACILITIES	UCA Section 26A-1-121	yes/no	yes	These requirements may apply to disposal of non-hazardous debris at the requirements would apply as "off-site" to the construction landfill to

TABLE 3
ARARs for MODIFIED COMBINED REMEDY

REQUIREMENT	CITATION	Applicable ?/ Relevant and Appropriate?	Applicable Offsite Law?	COMMENTS
Location-Specific ARARs - Federal				
CLEAN WATER ACT				
- Permits for Dredged or Fill Material	33 USC § 404	yes/no	yes	Would apply to dredge or fill which may occur within the City Drain
ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT	16 USC §§470 40 CFR Part 6.301(b)	yes/no	yes	Applies if artifacts are encountered during remedial action.
HISTORIC SITES, BUILDINGS, AND ANTIQUITIES ACT	40 CFR Part 6.301(a)	yes/no	yes	Applies if historic structures are encountered at the Site.
ENDANGERED SPECIES ACT	16 USC §§531-1543 50 CFR Parts 17 & 402 40 CFR Part 6.302(h)	yes/no	yes	Applies if endangered species are encountered.
EXECUTIVE ORDER ON FLOODPLAIN MANAGEMENT	Exec. Order 11988	no/no	yes	Site is not in any delineated floodplain.
EXECUTIVE ORDER ON PROTECTION at the site. OF WETLANDS	Exec. Order 11990	yes/no	yes	Site was a wetland before CKD fill occurred. Some wetland areal exist
LOCATION-SPECIFIC ARARS - STATE				
Utah Antiquities Act ensure that Native of the small	Utah Code Unann. Title 9, Chapter 8 and Title 76, Chapter 6	yes/no	yes	The Utah Historical Society will review the intermediate design to American artifacts are not adversely impacted. Risk is minimal because amount of native soil that will be disturbed.

RESPONSIVENESS SUMMARY

AMENDED FOR RECORD OF DECISION

PORTLAND CEMENT CO. (KILN DUST #2 & #3)

COMBINED OPERABLE UNITS 1 AND 2

SALT LAKE CITY, UTAH

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RESPONSIVENESS SUMMARY

FOR THE AMENDED RECORD OF DECISION PORTLAND CEMENT CO. (KILN DUST #2 & #3) COMBINED OPERABLE UNITS 1 AND 2 SALT LAKE CITY, UTAH

A. OVERVIEW

In July 1990 and March 1992, EPA and UDEQ issued records of decision (RODs) describing selected remedies for Operable Units 1 and 2 (OU1 and OU2), respectively. The public was invited to comment on each of the proposed plans for these RODs, as required, and Responsiveness Summaries were prepared for each ROD.

In May 1992 the OUs for the Portland Cement Co. (Kiln Dust #2 and #3) Superfund Site (Site) were combined to facilitate remedial design (RD) and remedial action (RA). The selected remedies for the two operable units were also combined and entailed removal and off-site disposal of cement kiln dust (CKD); removal, on-site treatment and off-site disposal of contaminated soil and chromium-bearing bricks; and placement of a protective layer of backfill on the Site. This remedy is referred to as the "original combined remedy." RD began in January 1993. In November 1993, EPA and UDEQ issued an Explanation of Significant Differences (ESD)/Proposed Plan which proposed several modifications to the original combined remedy, including:

- ! Disposal of CKD in one of three types of new or existing off-site facilities, rather than in an off-site landfill built specifically for the CKD, or possible re-use of the CKD;
- ! Disposal of contaminated soil without prior treatment, rather than treating the soil before disposal;
- ! Treatment of chromium-bearing bricks off-site, rather than on the Site; and
- ! Reuse of non-hazardous Site debris as fill material on the Site, rather than disposing of the debris off the Site.

During the 30-day public comment period that followed the issuance of the ESD/Proposed Plan, EPA and UDEQ received written and verbal comments from concerned citizens, elected officials and representatives from community organizations. Based on these comments, it was concluded that area residents and property owners would support the modified combined remedy, provided the remedial action was effective in reducing the risk associated with the Site and did not create environmental problems elsewhere.

The following sections of this Responsiveness Summary address community involvement and comments and responses received from the community.

B. BACKGROUND ON COMMUNITY INVOLVEMENT

Community involvement with the remedial process at the Site prior to July 1990 and March 1992 is discussed in the OU1 and OU2 RODs, respectively. In July 1992, the Community Relations Plan for the Site was updated. The Portland Citizens Committee was formed in February 1993 to provide a forum for communication among concerned citizens, local government officials, UDEQ and EPA. Periodic committee meetings open to the public were held in Salt Lake City between February and May 1995 and are expected to continue throughout RD and RA. A series of informational fact sheets has also enabled community participation.

C. SUMMARY OF COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD

All public response to the proposed modifications to the combined remedy was received during a public meeting held in Salt Lake City on November 10, 1993. One written comment was received and the remainder were presented verbally at the meeting. Transcripts of the public meeting are available at administrative record repositories in Denver and Salt Lake City. The comments follow and are categorized by relevant topic.

Decision Process

Comment: A representative from the Salt Lake Community Action Program asked if the community in the vicinity of the Summitville Superfund Site (Summitville) had been informed about the possible receipt of CKD from the Portland Cement Site.

Response: The public was informed in the July 1993 Engineering Evaluation/Cost Analysis (EE/CA) document for Summitville that an amendment such as CKD or lime may be used to treat the acid-producing waste rock. The public was invited to

comment on the EE/CA before it was finalized.

This concern is no longer relevant because since issuing the Proposed Plan, EPA has determined that the Portland Cement CKD cannot be cost-effectively transported to the Summitville mine. Use of the CKD for this purpose is therefore no longer a viable option.

Comment: A representative from the Salt Lake Community Action Program asked why the contaminated soils have been reclassified as a non-hazardous waste.

Response: During RD, EPA Region VIII reviewed the laws and regulations governing hazardous waste. After their review, Region VIII staff asserted that because the source of soil contamination was CKD, which is exempted from being a hazardous waste, the soil should also be exempted from being a hazardous waste. Region VIII formally requested an interpretation on this issue from EPA Headquarters. EPA Headquarters subsequently ruled that soils contaminated with CKD, given certain conditions, should be exempt from regulation as a hazardous waste under RCRA Subtitle C. This ruling was published in a memo from Sylvia Lowrance and Lisa Friedman/EPA Headquarters to Robert Duprey/EPA Region VIII dated June 30, 1993. The CKD and contaminated soil will be disposed in accordance with EPA's regulations regarding off-site disposal of wastes from Superfund Sites.

Comment: An area resident asked if the proposed modifications to the remedy, including use of the CKD at Summitville, are acceptable to the States of Utah and Colorado.

Response: The State of Utah supports the remedy modifications and concurs with EPA's determination that the Summitville disposal option should be ruled out because the CKD cannot be cost-effectively transported to the Summitville mine.

The State of Colorado's only authority regarding the proposed modifications to the remedy relate to use of CKD at Summitville. Since disposal of the CKD at the Summitville Mine is no longer an option, EPA has not formally solicited the State's opinion it.

Proposed Handling, Treatment and Disposal of CKD, Contaminated Soil and Chromium-Bearing, Bricks

Comment: Representatives from the Salt Lake Community Action Program and the West Salt Lake Community Council asked if the CKD from the Site could be put to beneficial uses other than as a neutralizing agent at Summitville.

Response: Yes. There may be other beneficial uses for the CKD from the Site, provided the approach better satisfies the nine criteria including implementability, cost effectiveness and compliance with applicable laws than the disposal options being considered. To date, no other uses which satisfy these criteria have been formally proposed to EPA or the State.

Comment: An area resident asked how much CKD from the Site could be accepted by Summitville and how Summitville plans to utilize the CKD. Also, who would own the CKD after it is taken to Summitville?

Response: Summitville could use all of the CKD on the Site, provided it could be cost-effectively transported to the mine and tests indicated that the CKD could serve as an effective neutralizing agent. The owner of the mine pit would own all waste rock and amendments, such as the CKD from the Site, placed in the mine pit.

Comment: An area resident asked if UDEQ or EPA has previously remediated sites containing CKD.

Response: Yes. A ROD database search revealed three sites (two in Iowa and one in Florida) containing CKD that are being remediated under the Superfund program. UDEQ and EPA have also successfully remediated large amounts of bulk materials such as mine tailings and contaminated soils. CKD's unique properties are well documented and have been and will continue to be considered during the remedial process.

Comment: In a written comment, representatives from the Magna Area Council and the Magna Water Improvement District expressed opposition to constructing a new

landfill near Magna's residential areas. They also asked about the commercial facilities under consideration to receive Site wastes.

Response: Construction of a new landfill would be considered only if an existing commercial landfill were not able to legally and cost-effectively accept the waste. If a new landfill is built, areas outside of the Salt Lake Valley will be considered in response to community concerns. Six existing commercial landfills are considered to be potential recipients of Site wastes: Grassy Mountain and East Carbon Development Corporation (ECDC) in Utah; Envirocare Services Inc. (ESI) in Idaho; Conservation Services Inc. (CSI) and Highway 36 in Colorado; and US Ecology in Nevada.

Comment: An area resident asked where the bricks would be disposed.

Response: The facility which will treat and dispose of the chromium-bearing bricks will be determined during the bidding process. The bricks, which are hazardous waste, must be treated and disposed in a permitted facility. Grassy Mountain, ESI, Highway 36 and US Ecology are permitted to treat and dispose of hazardous waste and may be used by the construction contractor to dispose of the bricks.

Comment: A nearby property owner asked about coordinating the timing of shipping the CKD from the Site to Summitville.

Response: Had the Summitville disposal option proved viable, close coordination between the contractors at the Portland Cement and Summitville Sites would have been very important.

Project Background and Status

Comment: Several meeting participants asked about Site background, previous and on-going sampling events, contamination and associated risks, and the original and modified combined remedies.

Response: Reports containing this information have been prepared for UDEQ and EPA by various contractors and can be found in the administrative record files located at the EPA Region VIII in Denver and the Chapman Library in Salt Lake City.

Comment: A nearby property owner requested that the owners of affected adjacent properties be considered during clean-up activities, and that this concern be noted on the record.

Response: This concern has been noted. Additional locations on and adjacent to the Site have been sampled and tested for contamination. These data along with those collected during RA will enable the full horizontal extent of contamination associated with the Site to be identified and remediated to the extent practicable.

Comment: A nearby property owner asked if all soil sampling on and adjacent to the Site has been completed.

Response: RD-related sampling has been completed. Confirmation testing of soil will be conducted after excavation to verify that CKD and contaminated soil has been removed. This may extend off the Site as necessary.

Comment: An area resident asked how long the current groundwater monitoring program will continue and at what level the groundwater is considered uncontaminated.

Response: EPA and UDEQ have commenced work on a remedial investigation/focused feasibility study (RI/FFS) at the Site to address the groundwater operable unit. Groundwater monitoring will be conducted as part of this RI/FFS. The cleanup remedy selected as a result of the RI/FFS process will establish the duration of the monitoring program.

Cost

Comment: An area resident asked about the final capital cost of remediation and the status of the PRPs.

Response: The ROD Amendment cites an estimated present worth cost for the modified

remedy of \$18.6 million. An engineer's estimate of the construction costs is being developed as part of the RD and will provide a better estimate of the cost of construction. The estimate will be further refined during the bidding process and execution of the construction contract. However, the actual formal costs will be available when the clean-up is completed.

Lone Star Industries, which purchased the Portland Cement Company of Utah, is the primary PRP at the Site. Property owners who leased their property to Portland Cement/Lone Star are also considered PRPs. EPA and UDEQ entered an agreement with Lone Star whereby Lone Star would pay EPA and the State approximately \$18.3 million to use toward clean up of the Site. EPA and UDEQ are currently negotiating settlement agreements with the other PRPs at the Site.

D. SUMMARY OF RECENT COMMUNITY RELATIONS ACTIVITIES

The Community Relations Activities at the Portland Cement Co. (Kiln Dust #2 & #3) Superfund Site since the issuance of the OU2 ROD has included the following:

April 1992	Update/Fact Sheet published.
February 3, 1993	Citizens Committee meeting, Salt lake City.
April 14, 1993	Citizens Committee meeting, Salt Lake City.
May 1993	Fact Sheet published.
June 16, 1993	Citizens Committee meeting, Salt Lake City.
August 25, 1993	Citizens Committee meeting, Salt Lake City.
October 27, 1993	Citizens Committee meeting, Salt Lake City.
November 1, 1993	The ESD/Proposed Plan was distributed to everyone on the mailing list prior to beginning the public comment period. Also, an ad was placed in local newspapers to announce the comment period.
November 1 - December 1, 1993	Public Comment period for ESD/Proposed Plan.
November 10, 1993	Public Meeting to receive comments on the ESD/Proposed Plan, Salt Lake City.
December 15, 1993	Citizens Committee meeting, Salt Lake City.
February 16, 1994	Citizens Committee meeting, Salt Lake City.
April 20, 1994	Citizens Committee meeting, Salt Lake City.
July 1994	News Release on Lone Stax Settlement.
November 1994	Conducted additional community interviews, reviewed and updated Community Relations Plan.
November 16, 1994	Citizens Committee meeting, Salt lake City.
February 15, 1995	Citizens Committee meeting, Salt Lake City.
May 3, 1995	Updated the Salt Lake City Mayor's Office.
May 10, 1995	Citizens Committee meeting, Salt Lake City.
June 22, 1995	Citizens Committee meeting, Salt Lake City.